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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,008	01/02/2001	Stefan Somlo	96700/658	1280

7590 04/14/2004

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Attorneys for Applicants
90 Park Avenue
New York, NY 10016

EXAMINER

LU, FRANK WEI MIN

ART UNIT	PAPER NUMBER
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1634

DATE MAILED: 04/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

8M

Office Action Summary

Application No.

09/753,008

Applicant(s)

SOMLO ET AL.

Examiner

Frank W Lu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 76-81 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 76-81 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/24/2003</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. In applicant's response to previous restriction, applicant indicates that claims 1-75 has been canceled in the amendment filed on October 24, 2001. After reviewing the restriction made by previous examiner in other art unit and applicant's response filed on March 24, 2003, the examiner agrees to withdraw the restriction made on March 11, 2003. Therefore, claims 76-81 will be examined.

Specification

2. The disclosure is objected to because of the following informalities. (1) applicant indicates that this instant application is a continuation of cases 09/385,752 and 08/651,999 in the first sentence of the specification. However, it is unclear that applicant claims priority for the cases 09/385,752 and 08/651,999 or not; (2) there are Figure 5A to 5G. However, the Brief Description of the Figures only describes Figure 5; and (3) in page 12 of the specification, there are several nucleotide sequences that have more than 10 nucleotides. However, these nucleotide sequences are without SEQ ID Nos.

Appropriate correction is required.

Claim Objections

3. Claims 76 and 79 are objected to because of the following informality: "the PKD2 gene" should be "PKD2 gene".

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4. Claim 79 is objected to because of the following informality: “wherein the mutation comprises one or more deletion, insertion, point, or rearrangement mutations” should be “wherein the mutation comprise deletion, insertion, point, or rearrangement mutation”.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 76-81 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for performing the methods recited in claims 76-81 by comparing PKD2 gene in a polynucleotide sample with its wild-type PKD2 gene, does not reasonably provide enablement for the methods recited in claims 76-81 by comparing PKD2 gene from one species in a polynucleotide sample with a wild-type PKD2 gene from other species. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

In *In re Wands*, 858 F.2d 731,737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988) the court considered the issue of enablement in molecular biology. The Court summarized eight factors to be considered in a determination of "undue experimentation". These factors include: (a) the quantity of experimentation necessary; (b) the amount of direction or guidance presented; (c) the presence or absence of working examples; (d) the nature of the invention; (e) the state of the prior art; (f) the relative skill of those in the art; (g) the predictability of the art; and (h) the

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breadth of the claims. The Court also stated that although the level of skill in molecular biology is high, results of experiments in molecular biology are unpredictable.

To begin, there is no direction or guidance to perform the methods recited in claims 76-81 by comparing PKD2 gene from one species in a polynucleotide sample with a wild-type PKD2 gene from other species. While the relative skill in the art is very high (the Ph.D. degree with laboratory experience), there is no predictability whether the methods recited in claims 76-81 can be performed by comparing PKD2 gene from one species in a polynucleotide sample with a wild-type PKD2 gene from other species.

Claims 76-81 are directly to a method of detecting the presence or absence of a mutation in the sequence of PKD2. The specification only describes a method of detecting the presence or absence of a mutation in the sequence of PKD2 by comparing human PKD2 gene in a polynucleotide sample with human wild-type gene. However, the specification does not provide guidance for a method of detecting the presence or absence of a mutation in the sequence of PKD2 by comparing PKD2 gene from one species in a polynucleotide sample with a wild-type PKD2 gene from other species. Because the specification does not provide an evidence to show that SEQ ID NO: 6 (human PKD2 with GeneBank Accession No: U50928) is identical among all species, it is unclear whether a method of detecting the presence or absence of a mutation in the sequence of PKD2 can be performed by comparing PKD2 gene from one species in a polynucleotide sample with a wild-type PKD2 gene from other species. In fact, sequence searching shows that SEQ ID NO: 6 (human PKD2) is only partially homologous to murine PKD2 but is not identical to murine PKD2 (see attached results from sequence searching). This suggests that it is impossible to perform the methods recited in claims 76-81 by comparing

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PKD2 gene from one species in a polynucleotide sample with a wild-type PKD2 gene from other species.

With these unpredictable factors, the skilled artisan will have no way to predict the experimental results. Accordingly, it is concluded that undue experimentation is required to make the invention as it is claimed. These undue experimentations at least includes to test whether that the methods recited in claims 76-81 can be performed by comparing PKD2 gene from one species in a polynucleotide sample with a wild-type PKD2 gene from other species.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 76-81 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 76 is rejected as vague and indefinite. Since the step (a) of the claim does not indicate that a polynucleotide sample has PKD2 gene, it is unclear how the difference between the polynucleotide sample and the reference wild-type PKD2 sequence are mutations of PKD 2 gene. Furthermore, the claim does not indicate what gene has “mutations which comprise one or more deletion, insertion, point, or rearrangement mutations”. Please clarify.

10. Claim 76 is rejected as vague and indefinite. Although the claim is directed to a method of detecting the presence or absence of a mutation in the sequence of PKD2 gene, there is no method step in the claim for Claim 76 is rejected as vague and indefinite and the goal (preamble) can not reach. Please clarify.

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11. Claim 79 is rejected as vague and indefinite. Since the step (a) of the claim does not indicate that a polynucleotide sample has PKD2 gene, it is unclear how performing sequence analysis of the polynucleotide sample can detect the presence or absence of a mutation in the sequence of the PKD2 gene of the subject. Please clarify.

12. Claim 79 recites the limitation "the sequence of the PKD2 gene of the subject" in the claim. There is insufficient antecedent basis for this limitation in the claim because step (a) does not indicate that a subject has a PDK2 gene. Please clarify.

Double Patenting

13. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claims 76-81 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,228,591 B1.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the examined claims in this instant application is either anticipated by, or would have been obvious over, the reference claims. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*,

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686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969). Although claims 76 and 79 in this instant application are not identical to claim 1 of US Patent No. 6,228,591 B1, claim 1 in US Patent 6,228,591 B1 is directed to the same subject matter and fall entirely within the scope of claims 76 and 79 in this instant application. In other words, claims 76 and 79 in this instant application are anticipated by claim 1 of US Patent No. 6,228,591 B1. Note that claims 77, 78, 80, and 81 are identical to claims 2 and 3 of US Patent No. 6,228,591 B1.

Conclusion

15. No claim is allowed.
16. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CAR § 1.6(d)). The CM Fax Center number is either (703) 872-9306 or (703)305-3014.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Lu, Ph.D., whose telephone number is (571)272-0746. The examiner can normally be reached on Monday-Friday from 9 A.M. to 5 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion, can be reached on (571)272-0782.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Chemical Matrix receptionist whose telephone number is (703) 308-0196.

Frank Lu
PSA
April 9, 2004


FRANK LU
PATENT EXAMINER



results of BLAST

BLASTN 2.2.8 [Jan-05-2004]

Reference:

Altschul, Stephen F., Thomas L. Madden, Alejandro A. Schäffer, Jinghui Zhang, Zheng Zhang, Webb Miller, and David J. Lipman (1997), "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs", Nucleic Acids Res. 25:3389-3402.

RID: 1081784038-16067-188708913800.BLASTQ3

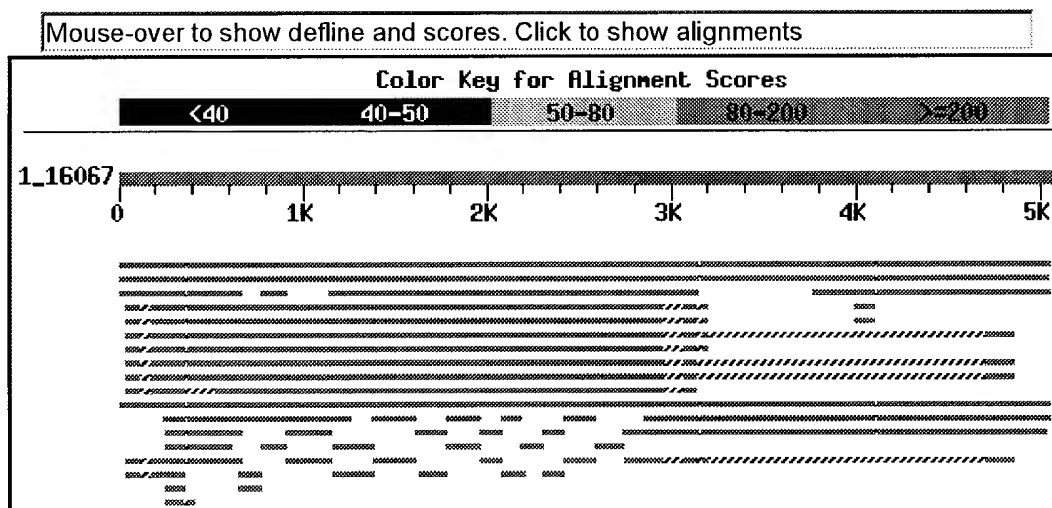
Query=

(5073 letters)

Database: All GenBank+EMBL+DDBJ+PDB sequences (but no EST, STS, GSS, or phase 0, 1 or 2 HTGS sequences)
2,226,501 sequences; 10,398,606,914 total letters

If you have any problems or questions with the results of this search please refer to the [BLAST FAQs](#)

[Taxonomy reports](#)

Distribution of 3819 Blast Hits on the Query Sequence

Sequences producing significant alignments:

	Score	E
	(bits)	Value

[gi|33286447|ref|NM_000297.2|](#) Homo sapiens polycystic kidney... 5453 0.0

[gi|1373168|gb|U50928.1|HSU50928](#) Human autosomal dominant po... 5453 0.0

[gi|1477691|gb|U56813.1|HSU56813](#) Human polycystwin mRNA, par... 3895 0.0



gi 38565985 gb BC062969.1	Mus musculus polycystic kidney d...	2319	0.0	
gi 31419361 gb BC053058.1	Mus musculus polycystic kidney d...	2319	0.0	
gi 4150864 emb Y13278.1 MMPOLCYST	Mus musculus mRNA for pol...	2311	0.0	
gi 26343500 dbj AK053502.1	Mus musculus 0 day neonate eyeb...	2311	0.0	
gi 2558834 gb AF014010.1 AF014010	Mus musculus polycystic k...	2309	0.0	
gi 31543486 ref NM_008861.2	Mus musculus polycystic kidney...	2309	0.0	
gi 34536625 dbj AK128961.1	Mus musculus cDNA fis, clone TR...	2165	0.0	
gi 11128446 gb AC084732.1 AC084732	Homo sapiens BAC clone R...	1742	0.0	
gi 6855623 gb AF113693.1 AF113693	Homo sapiens clone FLB5135	1739	0.0	
gi 3005705 gb AF054992.1 AF054992	Homo sapiens clone 23778 ...	1723	0.0	
gi 3126903 gb AF004873.1 HSPKD15	Homo sapiens autosomal dom...	1655	0.0	
gi 4107256 emb Y14120.1 MMY14120	Mus musculus mRNA for poly...	860	0.0	
gi 3126889 gb AF004859.1 HSPKD01	Homo sapiens autosomal dom...	694	0.0	
gi 3126892 gb AF004862.1 HSPKD04	Homo sapiens autosomal dom...	502	e-138	
gi 15871680 emb AJ327262.1 HSA327262	Homo sapiens genomic s...	464	e-127	
gi 3126894 gb AF004864.1 HSPKD06	Homo sapiens autosomal dom...	460	e-125	
gi 3126893 gb AF004863.1 HSPKD05	Homo sapiens autosomal dom...	450	e-122	
gi 15875582 emb AJ331164.1 HSA331164	Homo sapiens genomic s...	381	e-101	
gi 3126896 gb AF004866.1 HSPKD08	Homo sapiens autosomal dom...	365	6e-97	
gi 3126895 gb AF004865.1 HSPKD07	Homo sapiens autosomal dom...	335	5e-88	
gi 3126901 gb AF004871.1 HSPKD13	Homo sapiens autosomal dom...	327	1e-85	
gi 4150862 emb Y14105.1 MMY14105	Mus musculus pkd2 exon 1 a...	321	8e-84	
gi 3126902 gb AF004872.1 HSPKD14	Homo sapiens autosomal dom...	295	5e-76	
gi 4107461 emb Y14110.1 MMY14110	Mus musculus pkd2 exon 6	278	1e-70	
gi 3126891 gb AF004861.1 HSPKD03	Homo sapiens autosomal dom...	266	4e-67	
gi 7531965 gb AF004867.2 HSPKD09	Homo sapiens autosomal dom...	240	2e-59	
gi 3126900 gb AF004870.1 HSPKD12	Homo sapiens autosomal dom...	238	9e-59	
gi 3126890 gb AF004860.1 HSPKD02	Homo sapiens autosomal dom...	230	2e-56	
gi 4107459 emb Y14108.1 MMY14108	Mus musculus pkd2 exon 4	226	3e-55	
gi 3126899 gb AF004869.1 HSPKD11	Homo sapiens autosomal dom...	200	2e-47	
gi 3126898 gb AF004868.1 HSPKD10	Homo sapiens autosomal dom...	200	2e-47	
gi 4107463 emb Y14112.1 MMY14112	Mus musculus pkd2 exon 8	198	8e-47	
gi 10121558 gb AF242389.1 AF242389	Mus musculus autosomal d...	196	3e-46	
gi 4107458 emb Y14107.1 MMY14107	Mus musculus pkd2 exon 3	170	2e-38	
gi 15872509 emb AJ328091.1 HSA328091	Homo sapiens genomic s...	168	7e-38	
gi 4107468 emb Y14113.1 MMY14113	Mus musculus pkd2 exon 9	161	2e-35	
gi 15871676 emb AJ327258.1 HSA327258	Homo sapiens genomic s...	157	3e-34	
gi 4107472 emb Y14117.1 MMY14117	Mus musculus pkd2 exon 13	153	4e-33	
gi 4150881 emb Y14111.1 MMY14111	Mus musculus pkd2 exon 7	149	7e-32	
gi 27802045 gb AC011084.17	Homo sapiens chromosome 11, clo...	139	6e-29	
gi 4107471 emb Y14116.1 MMY14116	Mus musculus pkd2 exon 12	135	1e-27	
gi 18139513 gb AC069281.6	Homo sapiens BAC clone RP11-44M6...	133	4e-27	
gi 5002592 emb Y17457.1 HOSA17457	Homo sapiens LSFR3A gene,...	131	2e-26	
gi 18650683 emb AL445931.29	Human DNA sequence from clone ...	131	2e-26	
gi 34530661 dbj AK124783.1	Homo sapiens cDNA FLJ42793 fis,...	131	2e-26	
gi 12717949 emb AL158207.15	Human DNA sequence from clone ...	131	2e-26	
gi 2251212 gb AC002293.1 AC002293	Genomic sequence from Hum...	131	2e-26	
gi 2583102 gb AC002102.1 AC002102	Homo sapiens chromosome 9...	131	2e-26	
gi 26096354 dbj AK054397.1	Mus musculus 2 days pregnant ad...	131	2e-26	
gi 4107457 emb Y14106.1 MMY14106	Mus musculus pkd2 exon 2	127	2e-25	
gi 19033426 gb AC018450.26	Homo sapiens 3 BAC RP11-80H8 (R...	127	2e-25	

gi 9408726 emb AL023803.3 HS616B8	Human DNA sequence from c...	125	9e-25	
gi 30522921 gb AC096537.3	Homo sapiens chromosome 1 clone ...	123	4e-24	
gi 23396277 gb AC124914.3	Homo sapiens chromosome 3 clone ...	123	4e-24	
gi 1669681 emb Z82901.1 HS506G2A	Human DNA sequence from cl...	123	4e-24	
gi 15142005 emb AL513185.12	Human DNA sequence from clone ...	123	4e-24	
gi 15962561 emb AL357037.13	Human DNA sequence from clone ...	123	4e-24	
gi 29293996 gb AC080129.26	Homo sapiens 3 BAC RP11-135A1 (...)	123	4e-24	
gi 28973812 gb AC116351.2	Homo sapiens chromosome 5 clone ...	123	4e-24	
gi 21427846 gb AC040977.10	Homo sapiens chromosome 17, clo...	123	4e-24	
gi 27877146 gb AC124890.8	Homo sapiens 12 BAC RP11-450G15 ...	123	4e-24	
gi 16328249 gb AC008614.6	Homo sapiens chromosome 5 clone ...	123	4e-24	
gi 27764204 emb AL109767.7 CNS018OX	Human chromosome 14 DNA...	123	4e-24	
gi 4107460 emb Y14109.1 MMY14109	Mus musculus pkd2 exon 5	123	4e-24	
gi 2329922 gb AC002404.1 AC002404	Human Chromosome X PAC RP...	123	4e-24	
gi 16555592 emb AL132819.6 CNS01DIO	Human chromosome 14 DNA...	123	4e-24	
gi 41324131 gb AY527817.1	Homo sapiens arachidonate 12-lip...	123	4e-24	
gi 18476640 emb AL512643.9	Human DNA sequence from clone R...	123	4e-24	
gi 22324235 emb AL121602.34 HSDJ636H5	Human DNA sequence fr...	123	4e-24	
gi 21617782 gb AC097662.5	Homo sapiens BAC clone RP11-563C...	121	1e-23	
gi 21735134 gb AC079097.6	Homo sapiens chromosome 8, clone...	121	1e-23	
gi 18997243 gb AC008665.6	Homo sapiens chromosome 5 clone ...	121	1e-23	
gi 18482321 gb AC079776.5	Homo sapiens BAC clone RP11-315H...	121	1e-23	
gi 11225364 gb AC044787.6 AC044787	Homo sapiens chromosome ...	121	1e-23	
gi 16943977 emb AL353093.18	Human DNA sequence from clone ...	121	1e-23	
gi 2982169 gb AC004381.1 HUAC004381	Homo sapiens Chromosome...	119	6e-23	
gi 6630488 gb AC008149.14	Homo sapiens 12 BAC RP11-394J1 (...)	119	6e-23	
gi 2578066 emb Z98036.1 HS187N21	Human DNA sequence from cl...	119	6e-23	
gi 20334687 gb AC084871.4	Homo sapiens BAC clone RP11-701P...	119	6e-23	
gi 28626577 gb AC008121.43	Homo sapiens 12 BAC RP11-407N8 ...	119	6e-23	
gi 21070548 gb AC013242.8	Homo sapiens chromosome 10 clone...	119	6e-23	
gi 20330874 gb AC099784.2	Homo sapiens chromosome 1 clone ...	119	6e-23	
gi 25815264 gb AC131011.5	Homo sapiens X BAC RP13-314C10 (...)	119	6e-23	
gi 19697510 gb AC107051.4	Homo sapiens BAC clone RP11-224D...	119	6e-23	
gi 19551200 gb AC084353.5	Homo sapiens BAC clone RP11-592K...	119	6e-23	
gi 15321576 gb AC079922.5	Homo sapiens BAC clone RP11-368A...	119	6e-23	
gi 32490467 dbj AP006545.1	Homo sapiens genomic DNA, chrom...	119	6e-23	
gi 31745092 dbj AP001028.7	Homo sapiens genomic DNA, chrom...	119	6e-23	
gi 22202654 dbj AP001029.5	Homo sapiens genomic DNA, chrom...	119	6e-23	
gi 2547406 gb AF024533.1 AF024533	Homo sapiens cosmid 123E1...	119	6e-23	
gi 3694626 gb AC005764.1 AC005764	Homo sapiens chromosome 1...	119	6e-23	
gi 25136942 emb AL591845.27	Human DNA sequence from clone ...	119	6e-23	
gi 4107474 emb Y14119.1 MMY14119	Mus musculus pkd2 exon 15	119	6e-23	
gi 3056603 gb AC004560.1 AC004560	Homo sapiens chromosome 1...	119	6e-23	
gi 19034023 gb AC005088.3	Homo sapiens BAC clone CTA-313A1...	119	6e-23	
gi 41350103 gb AC146278.3	Pan troglodytes chromosome X clo...	119	6e-23	
gi 8218068 emb AL078590.28 HSA557H15	Human DNA sequence fro...	119	6e-23	

Alignments

Get selected sequences

Select all

Deselect all

☐ >gi|33286447|ref|NM_000297.2| Homo sapiens polycystic kidney disease 2 (auto mRNA)

Sbjct: 1861 tgaggaagtggctagtcctgaattgctgtaacaagcacactatatttatatgccctgaccac 1920

Query: 3066 cataggatgctagtccttgtgaccgattgctaatacttctgcactttaatttattttatat 3125



|||||

Sbjct: 1921 cataggatgctagtccttgtgaccgattgctaatacttctgcactttaatttattttatat 1980

Query: 3126 aaactttacccatggttcaaa 3146

|||||

Sbjct: 1981 aaactttacccatggttcaaa 2001

 >gi|38565985|gb|BC062969.1|  Mus musculus polycystic kidney disease 2, mRNA (IMAGE:6409512), complete cds
Length = 3919

Score = 2319 bits (1170), Expect = 0.0

Identities = 2224/2578 (86%)

Strand = Plus / Plus

Query: 374 tggaaggggaagaaggcggaatggtggtggagatggacgtagagtggcgcccgggcagcc 433

||||| ||||||| || ||||||| ||||||| || ||||||| ||||||| ||

Sbjct: 489 tggaaggagaagaaggagggatggtggttagagatggatgtggagtggcgcccgggcagtc 548

Query: 434 ggaggtcggccgcctcctcggccgtgagctccgtgggcgcgcggagccgggggcttgggg 493

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Score = 196 bits (99), Expect = 3e-46

Identities = 159/179 (88%)

Strand = Plus / Plus

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||||| |||| || | ||| |||||||| | ||||||||||||||||||||
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Score = 71.9 bits (36), Expect = 1e-08

Identities = 40/68 (58%)

Strand = Plus / Plus

Query: 43 nnnnnnnnnnnnnnnnnnnnnnnnatggtgaactccagtcgcgtgcagcctcagcagccc 102
|||| |||||| |||||||| |||| ||||
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Query: 103 ggggacgc 110
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Score = 56.0 bits (28), Expect = 7e-04

Identities = 55/63 (87%), Gaps = 2/63 (3%)

Strand = Plus / Plus

Query: 3071 gatgctagtctttgtgaccgattgcta--atcttctgcactttaattttatattataaaa 3128
||||| |||||||||| |||| || || |||||||||||||||||||| ||||
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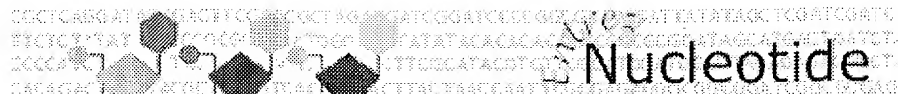
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Score = 50.1 bits (25), Expect = 0.045

Identities = 25/25 (100%)

Strand = Plus / Plus

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Sbjct: 3291 agaaatctaggtgtaaattattgagt 3315



Entrez PubMed Nucleotide Protein Genome Structure PMC Taxonomy Book

Search for

Limits Preview/Index History Clipboard Details
 Show:

☐ 1: BC053058. Mus musculus poly...[gi:31419361]

Links

LOCUS BC053058 3919 bp mRNA linear ROD 08-OCT-2003
 DEFINITION Mus musculus polycystic kidney disease 2, mRNA (cDNA clone MGC:62348 IMAGE:6409512), complete cds.
 ACCESSION BC053058
 VERSION BC053058.1 GI:31419361
 KEYWORDS MGC.
 SOURCE Mus musculus (house mouse)
 ORGANISM Mus musculus
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 REFERENCE 1 (bases 1 to 3919)
 AUTHORS Strausberg,R.L., Feingold,E.A., Grouse,L.H., Derge,J.G., Klausner,R.D., Collins,F.S., Wagner,L., Shenmen,C.M., Schuler,G.D., Altschul,S.F., Zeeberg,B., Buetow,K.H., Schaefer,C.F., Bhat,N.K., Hopkins,R.F., Jordan,H., Moore,T., Max,S.I., Wang,J., Hsieh,F., Diatchenko,L., Marusina,K., Farmer,A.A., Rubin,G.M., Hong,L., Stapleton,M., Soares,M.B., Bonaldo,M.F., Casavant,T.L., Scheetz,T.E., Brownstein,M.J., Usdin,T.B., Toshiyuki,S., Carninci,P., Prange,C., Raha,S.S., Loquellano,N.A., Peters,G.J., Abramson,R.D., Mullahy,S.J., Bosak,S.A., McEwan,P.J., McKernan,K.J., Malek,J.A., Gunaratne,P.H., Richards,S., Worley,K.C., Hale,S., Garcia,A.M., Gay,L.J., Hulyk,S.W., Villalón,D.K., Muzny,D.M., Sodergren,E.J., Lu,X., Gibbs,R.A., Fahey,J., Helton,E., Kettman,M., Madan,A., Rodrigues,S., Sanchez,A., Whiting,M., Madan,A., Young,A.C., Shevchenko,Y., Bouffard,G.G., Blakesley,R.W., Touchman,J.W., Green,E.D., Dickson,M.C., Rodriguez,A.C., Grimwood,J., Schmutz,J., Myers,R.M., Butterfield,Y.S., Krzywinski,M.I., Skalska,U., Smailus,D.E., Schnerch,A., Schein,J.E., Jones,S.J. and Marra,M.A.
 TITLE Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences
 JOURNAL Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
 MEDLINE 22388257
 PUBMED 12477932
 REFERENCE 2 (bases 1 to 3919)
 AUTHORS Strausberg,R.
 TITLE Direct Submission
 JOURNAL Submitted (02-JUN-2003) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA
 REMARK NIH-MGC Project URL: <http://mgc.nci.nih.gov>
 COMMENT Contact: MGC help desk
 Email: cgapbs-r@mail.nih.gov
 Tissue Procurement: Dr. Jim Lin, University of Iowa
 cDNA Library Preparation: M. Bento Soares, University of Iowa
 cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
 DNA Sequencing by: Sequencing Group at the Stanford Human Genome Center, Stanford University School of Medicine, Stanford, CA 94305

Web site: <http://www-shgc.stanford.edu>
Contact: (Dickson, Mark) mcd@paxil.stanford.edu
Dickson, M., Schmutz, J., Grimwood, J., Rodriguez, A., and Myers, R. M.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: <http://image.llnl.gov>
Series: IRAK Plate: 114 Row: p Column: 18
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 6679356.

FEATURES	Location/Qualifiers
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two helices but is not the Pfam family due to it lacking
the first four helices"
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3901 aaaaaaaaa aaaaaaaaa

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